

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 to 19. (Cancelled).

20. (Currently amended) An arrangement for the continuous manufacture of reinforced hose-shaped structures comprising:

a conveying unit for continuously advancing a row of sequentially coupled cylindrical mandrels in a conveying direction (X) and for returning individual mandrels to the manufacturing start;

at least one extrusion unit for applying a rubber or plastic layer to the periphery of the mandrels;

at least one unit for applying at least one reinforcement layer;

a separating device for cutting the reinforced hose shaped structures at the connecting locations of mutually adjoining mandrels;

and a strip off unit for stripping off the cut reinforced hose shaped structures from the individual mandrels;

the mandrels being rigid and so coupled to each other that, in each case, a peripherally extending cutting zone (S) is provided from a material, which is different from that of the mandrel, between the abutting surfaces of mutually adjoining mandrels;
and

vulcanizing the reinforced hose-shaped structures after the stripping off ~~and, that said arrangement is so aligned that a vulcanization of the reinforced hose-shaped structures takes place after the strip off.~~

21. (Previously presented) The arrangement of claim 20, further comprising a separating means application unit for applying separating means to the periphery of the mandrels; and, the separating means application unit being mounted ahead of the first extrusion unit as seen in the conveying direction.

22. (Previously presented) The arrangement of claim 21, further comprising a cutting device for cutting the stripped off, reinforced, hose shaped structures to defined vulcanization lengths; and, the cutting device being mounted in the manufacturing process ahead of a vulcanization unit.

23. (Previously presented) The arrangement of claim 22, wherein the cutting unit has a cutting head which is moveable transversely to the longitudinal axis of the reinforced hose shaped structure and relative thereto.

24. (Previously presented) The arrangement of claim 23, wherein the extrusion units, in each case, include a gear pump for conveying the extruded rubber or plastic to an extrusion head.

25. (Previously presented) The arrangement of claim 20, further comprising at least one measuring unit for continuously measuring the advancing speed of the mandrels and a control unit for controlling the quantity, which is supplied for applying a rubber or plastic layer, and for controlling the rotational speed of the bobbin creel unit in dependence upon the advancing speed in such a manner that a constant thickness of at least the first rubber or plastic layer and a defined angle of the at least one filament layer of the reinforcement layers is formed.

26. (Previously presented) The arrangement of claim 25, further comprising at least one measuring device for continuously measuring the thickness of the first rubber or plastic layer, which is applied directly to the mandrel; and, a control unit for controlling the rotational speed of the bobbin creel of the downstream bobbin creel unit in dependence upon the measured thickness of the first rubber or plastic layer.

27. (Previously presented) The arrangement of claim 26, further comprising process variable measurement means for measuring process variables when applying the rubber or plastic layers and reinforcement layers and a fault marking unit for applying markings to the reinforced hose shaped structures when the measured process variables exceed or drop below a particular fault tolerance amount.

28. (Previously presented) The arrangement of claim 27, wherein the mandrels have a length in the range of between one and eight meters, preferably between two and four meters.

29. (Previously presented) The arrangement of claim 27, further comprising mandrel adapters for lengthening the standard length of the mandrels; the mandrel adapters abutting virtually seamlessly against an assigned mandrel and being coupled tightly to the mandrel; and, the mandrel adapters having a coupling element for coupling the mandrel adapter to an additional mandrel with a peripherally extending cut zone (S) of a material, which is different from that of the mandrel, between the abutting surfaces to an adjoining mandrel.

30. (Currently amended) A method for the continuous manufacture of reinforced hose shaped structures, the method comprising the steps of:

(a) applying rubber or plastic layers and reinforcement layers in composite to the periphery of a row of cylindrical rigid mandrels, which are coupled sequentially to each other, and are continuously driven in a conveying direction (X);

(b) cutting the reinforced hose shaped structures at the connecting locations of mutually adjoining mandrels; the mandrels being coupled to each other in such a manner that, in each case, a peripherally extending cutting zone (S) of a material, which is different than that of the mandrel, is provided between the abutting surfaces of mutually adjoining mandrels;

(c) separating the mutually coupled mandrels from each other;

(d) stripping off the reinforced hose shaped structures from the mandrels;

(e) returning the mandrels for forming the row of mandrels in step (a); and,

(f) vulcanizing the stripped off reinforced hose shaped structures or parts thereof after step (d).

31. (Previously presented) The method of claim 30, comprising the step of applying separating means in advance of applying a first rubber or plastic layer to the mandrels in step (a).

32. (Previously presented) The method of claim 30, comprising the further step of cutting the stripped off reinforced hose shaped structures to defined vulcanization lengths in advance of the vulcanization in step (f).

33. (Previously presented) The method of claim 32, comprising the further step of extruding rubber or plastic layers, in each case, to the periphery of the cylindrical mandrels and onto the reinforcement layers.

34. (Previously presented) The method of claim 33, comprising the further step of volume dependently controlling the thickness of the rubber or plastic layers by means

of a gear pump which is mounted between the extruder and the extrusion head of an extrusion unit.

35. (Previously presented) The method of claim 34, comprising the further step of spiraling on filaments with a rotating bobbin creel for applying a reinforcement layer.

36. (Previously presented) The method of claim 35, comprising the further step of continuously measuring the advancing speed of the mandrels and controlling the rubber or plastic quantities, which are supplied for the application of a rubber or plastic layer, and controlling the application of the reinforcement layer in dependence upon the advancing speed in such a manner that a constant thickness of the rubber or plastic layers and a defined reinforcement layer is formed.

37. (Previously presented) The method of claim 36, comprising the further step of continuously measuring the thickness of the first rubber or plastic layer, which is applied directly to the mandrel, and controlling the application of the reinforcement layer in dependence upon the measured thickness of the rubber or plastic layer.

38. (Previously presented) The method of claim 37, comprising the further step of measuring process variables during the application of the rubber or plastic layers and reinforcement layers; marking of defective areas of the structures when the process variables exceed or drop below a particular fault tolerance amount; optical detection of the marked defective areas and separating out the sections of the reinforced hose shaped structures, which have been detected as defective, after the strip off of the reinforced hose shaped structure.